Project Introduction

CMC proposes, along with our collaborator, Dr. Mica Endlsey of SA Technologies, to produce a framework from which an Adaptive User Interface (AUI) can be modeled and ultimately developed that utilizes Augmented Reality (AR) to improve Situational Awareness (SA) for spaceflight users in a high-workload scenario. This effort includes a thorough literature review related to the effects of modality and format on workload, as these are key factors informing our framework. Additionally, we will develop a display philosophy to guide how information is presented to the user. The effort includes a survey, assessment and technical summary of currently available and developing hardware and software technologies related to AR. Finally, we will develop a proof-of-concept prototype to demonstrate our AUI model framework and display philosophy targeted at a specifically defined task.

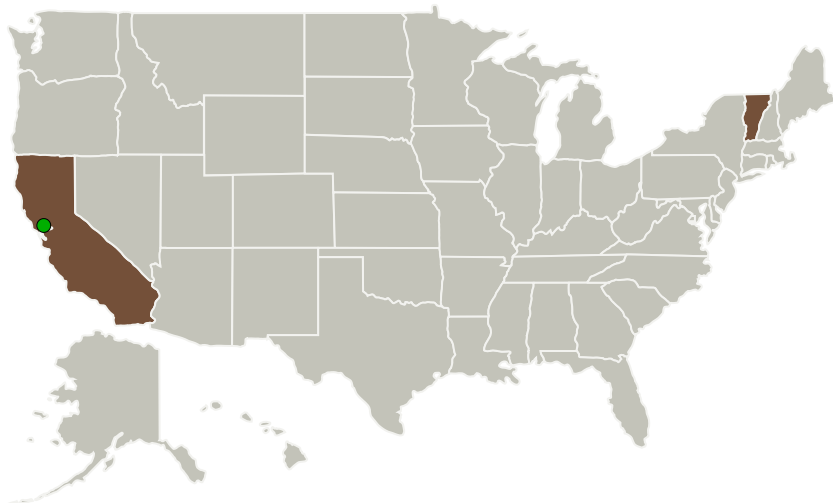## Primary U.S. Work Locations and Key Partners

Advanced Display Interface Technology, Phase I Briefing Chart Image

Table of Contents

Organizations Performing Work	Role	Type	Location
Creative MicroSystems Corporation	Lead Organization	Industry Women-Owned Small Business (WOSB)	
●Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Vermont

Images

Briefing Chart Image
Advanced Display Interface
Technology, Phase I Briefing Chart
Image
*(https://techport.nasa.gov/imag
e/132011)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission
Directorate (STMD)

Lead Organization:

Creative MicroSystems
Corporation

Responsible Program:

Small Business Innovation
Research/Small Business Tech
Transfer

Project Management

Program Director:

Jason L Kessler

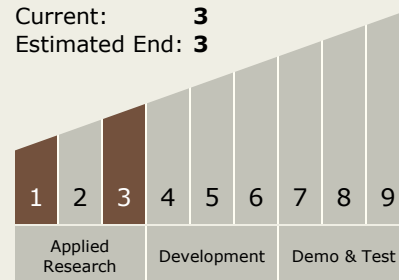**Program Manager:**

Carlos Torrez

Principal Investigator:

Michael Strauss

Technology Maturity (TRL)

Start: **1**
Current: **3**
Estimated End: **3**

1	2	3	4	5	6	7	8	9
Applied Research			Development			Demo & Test		

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  └ TX06.6 Human Systems Integration
    └ TX06.6.1 Human Factors Engineering

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System